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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,908	06/21/2003	Dongsoo Koh	0140105	5901

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EXAMINER

MIS, DAVID C

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,908

Applicant(s)

KOH ET AL.

Examiner

David Mis

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/20/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are again rejected under 35 U.S.C. 102(b.) as being clearly anticipated by Su et al.

Su et al disclosed a coarse tuning circuit (Fig. 3, Figs. 6A-6C, which control system is necessarily a circuit) coupled to a VCO (240) and to a PLL (... 612 ...), a phase-locked loop (Fig. 2) coupled to a loop filter (230) (column 4, lines 7-14, fine tuning voltage (Vc) (column 1, lines 37-40; column 7, lines 17-21), lock detect monitoring circuit coupled to the PLL (Figs. 3, 6A-6C) (614, 640, 650-654) (column 6, lines 64-65; column 7, lines 40-49; column 7, line 50 to column 8, line 28) determining a state of the PLL, VTUNE (Vc) monitoring circuit (Fig. 6B) (630) (column 7, lines 17-30) determining the fine tune voltage (Vc) generated by the loop filter (230), autotuner circuit (Figs. 6A-6C) connected to the monitoring circuits and configured to provide coarse tuning (Fig. 6A) (... 616 ...) of VCO (240) based on the fine tuning

voltage (Vc) (Fig. 6B) (630) (column 7, lines 17-30) and the state (Figs. 3, 6A-6C) (614, 640, 650-654) (column 6, lines 64-65; column 7, lines 40-49; column 7, line 50 to column 8, line 28) of the PLL; tank (Fig. 5); switched capacitors (Fig. 5); coarse tuning tank capacitors (column 7, lines 58-62); coarse tuning value set when loop locked and fine tuning voltage within range (... column 7, lines 22-24 ...); changing coarse tuning value based on fine tune voltage thresholds (... column 7, lines 22-41 ...); loop filter not switched out (Fig. 2).

Su et al did not lump their coarse tuning circuit elements into a block and name it a coarse tuning circuit, but they taught the elements having the coarse tuning circuit function, and so they did teach a coarse tuning circuit including a lock detect monitor, VTUNE monitoring circuit, and an autotuner circuit. Su et al disclosed their circuit by way of teaching the systemology, which one of ordinary skill in the art knew included the respective circuit elements. Su et al not only taught providing the PLL with an extended range VCO having selectable characteristic curves for establishing a fine tuned lock condition, Su et al also optimized the selection to provide minimal phase noise. (Column 6, lines 15-30). The Su et al PLL and / or loop filter is / are not disconnected from the VCO during coarse tuning (Fig. 2). Applicant's block diagram and circuit arrangement provided the same elements that

were merely semantically formatted into different blocks and arrangements in Su et al.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Mis whose telephone number is (571)272-1765. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)272-1769.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Mis
Primary Examiner
Art Unit 2817